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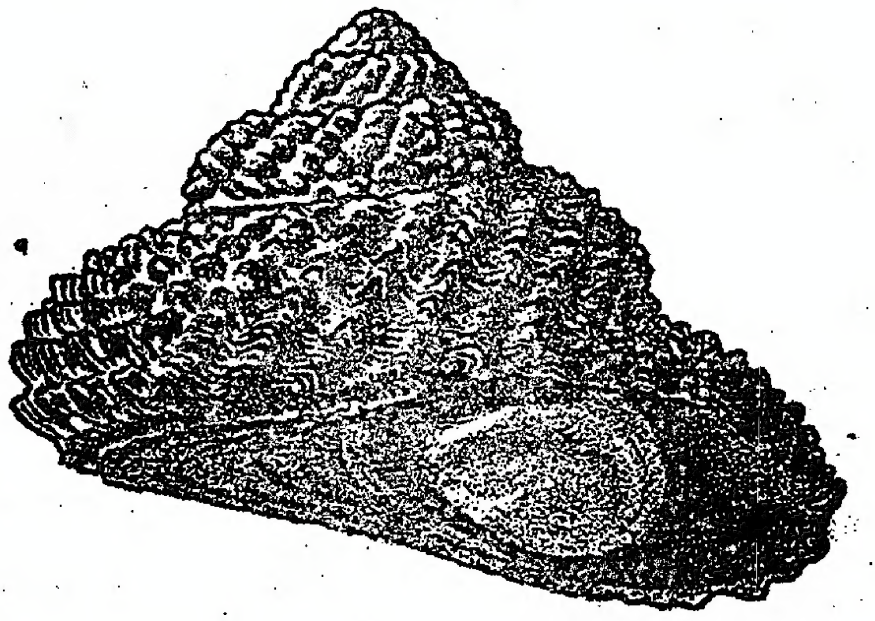


Journal of the Wellington Shell Club

New Zealand

Vol 2 No 3

EDITORIAL

Our readers may have been wondering whether 'Cookia' had gone out of existence. We want to assure them that this is not so. Unfortunately we have not been able to issue a part earlier in 1978, but 'Cookia' is now back in print again, and it is our intention to keep it that way.

All editors of Shell Club publications have the same problem --- lack of material to print, and we all from time to time make appeals to our members to supply articles for printing. These can, and many times do, fall on deaf ears, but we all live in hope that we will be supplied with enough manuscript to keep our publications going.

From now on we hope to have more regular issues of this journal.

W.J. Paul
Editor

NOTES ON NEW ZEALAND MARGINELLIDAE

by Dr. F.M. Climo

INTRODUCTION

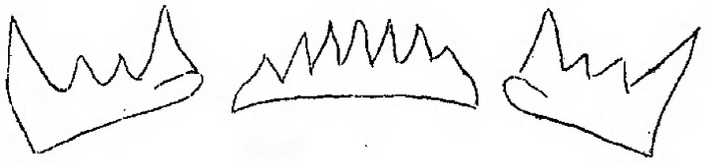
Before dealing with the complex problems of marginellid species in New Zealand and the genera into which the should be placed, tne following higher classification summary will orientate the family.

Marginellids belong to the highly evolved gastropod Order Neogastropoda. An older alternative name for this order was Stenoglossa based on a particular radular type and its specialised derivative. The two radular types were those found in all neogastropods except the cones (the rachiglossan type) and the specialised harpoon type (derived from the former) found in cones (the toxoglossan type).

The Neogastropoda are characterised by (mainly):

a. a more or less elongated siphonal canal

b. a rachiglossan radula



There are only 3 teeth across a row in a rachiglossan radula

The neogastropods are traditionally divided into 4 superfamilies:

	MURICACEA	
(=RACHIGLOSSA)	BUCCINACEA	NEOGASTROPODA
	VOLUTACEA	(= STENOGLOSSA)
(=TOXOGLOSSA)	--CONACEA	

The bracketed names show alternative higher classifications mentioned above. A quick summary of the above superfamilies follows:

Muricacea	Usually strongly sculptured shells. Two families.
Buccinacea	Conical shells with mainly spiral sculpture. Five families.
Volutacea	Conical to low spire. Aperture often elongated. Undisputed families are: a. Olividae b. Mitridae c. Harpidae d. Volutidae e. Marginellidae
Conacea	

Family: MARGINELLIDAE Fleming, 1828
Type genus: Marginella Lam., 1799
Type species of Marginella: Voluta glabella Linn., 1758

Diagnosis: Shell small and smooth. Low or insunk spire. Long narrow aperture with folds on the columellar side. No operculum. Siphon above the head.

Remarks: Unlike most neogastropods which have quite a range of shell structure in each genus, and have fairly conservative anatomy , the marginellids have (superficially at any rate) quite limited ranges of shell morphology, but group quite strongly into anatomical groups.

The work of both Coan (1965) and Ponder (1970) who followed Coan's higher classification indicates that genus Marginella has been a dumping ground for quite a few species with divergent origins.

In the brief treatment below, Coan's higher classification is presented and the N.Z. species which have been discussed by Ponder, or which seem to be fairly easily placed in genera, are slotted into Coan's system.

Marginellids are carnivores.

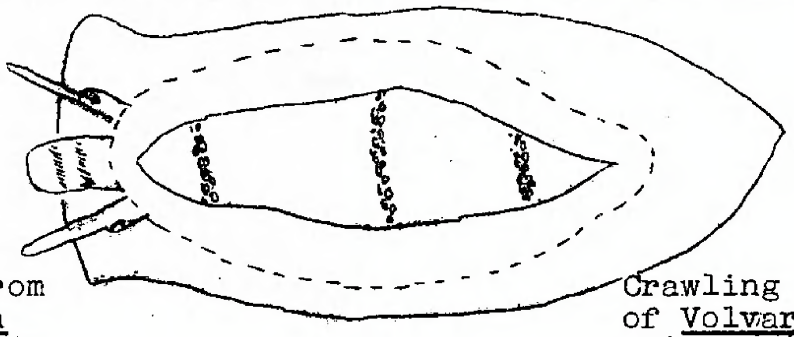
The family originated in the ancient Tethys Sea and Eocene fossils are found in Paris Basin and Australasian sediments. The family then spread widely and Oligocene fossils are widespread. The family now has a worldwide distribution and occupies a large percentage of the western African molluscan fauna.

There appear to be 3 major divisions in the family:

Subfamily: MARGINELLINAE Fleming

Relatively large species with brightly coloured shells (banded or unicoloured). Have long, thin, tentacles. Rachidian (central) tooth of radula is flat or curved with many cusps. The shape of the teeth are used as generic and subgeneric characters. Dominant in west Africa. Several N.Z. species fall into this subfamily.

Rachidian tooth from Mesoginella pygmaea (From Ponder, 1970, Fig 2, C)

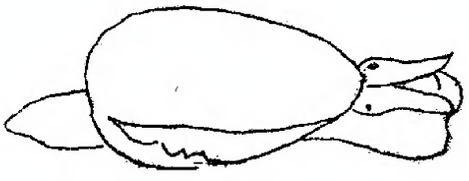


Crawling animal of Volvarinella cairoma (From Ponder, 1970, Fig. 1, C)

Subfamily: CYSTISCINAE Stimpson, 1865

Type genus : Cystiscus Stimpson, 1865
Type species of Cystiscus: Cystiscus cystiscus Redfield,

Very small species with characteristically white shells; short, triangular tentacles. Rachidian plate of radula is small, arched and has fewer cusps than Marginellinae. World wide but most dominant in eastern Pacific. Four described N.Z. species seem to fall into this group.



Crawling animal of Cystiscus angasi (From Laseron, 1957 Fig. 34)

Rachidian tooth of Cystiscus cystiscus (From Coan, 1965, Fig.8)

Subfamily: MARGINELLONINAE Coan, 1965

Type genus : Marginellona Martens, 1903
Type species of Marginellona: Marginellona gigas Martens, 1903

Subfamily named for the rare species in the genera Marginellona and Afrivoluta Tomlin.
Large shells and a rachidian tooth with many cusps.
Not represented in New Zealand.

GENERAL REMARKS BEFORE A DISCUSSION OF THE SPECIES:

The majority of N.Z. marginellids, which are sublittoral, are difficult to place in a subfamily. There are plenty of names available for shell groupings in Australasia. The names used by Laseron (1957) probably provide all those needed to accomodate the N.Z. fauna, though many of these are likely to be synonyms of earlier names proposed by Habe for the Japanese fauna.
Whether the many pallid sublittoral N.Z. species are marginellines or large cystiscines, or quite a different group, cannot yet be stated.
A large number of species await description in N.Z. and even the most common species are suspiciously variable throughout their ranges. Consequently, only the common intertidal species are covered in the following notes.

Marginellinae

None of the New Zealnd species belong in genus Marginella.

Genus: Mesoginella Laseron, 1957
Type species: Marginella turbinata Sowerby, 1846

The type species has the following features:

Laseron (1957) Fig.7

Subgenus: Sinuginella Laseron, 1957
Type species: Marginella inconspicua Sowerby, 1846

The type species has the following features:

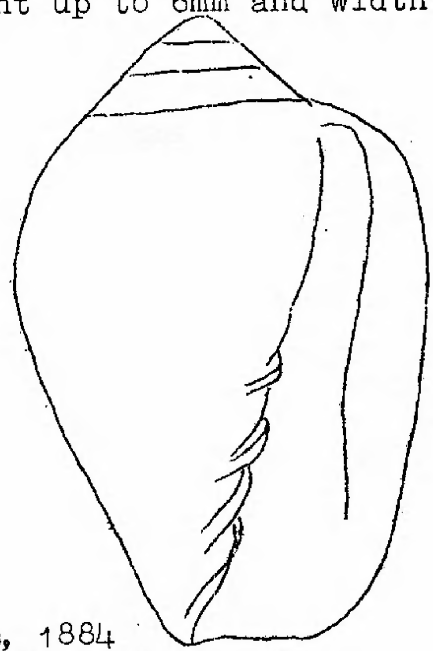
Laseron (1957) Fig.8

Ponder (1970) followed Coan (1965) in treating Sinuginella as a subgenus of Mesoginella the former differing only in not having the weak axial ribs of Mesoginella.

Mesoginella (Sinuginella) pygmaea (Sowerby, 1846)

" M. pygmaea is found in the North Island where it occurs as far south as Wellington, although it is most abundant on the north eastern coast. This species is generally found from just below low tide level down to several fathoms on coarse, sandy substrate on moderately exposed coasts" (Ponder, 1970, p.57)
The shell is glossy, pale yellow. Height up to 6mm and width to 4.8mm.

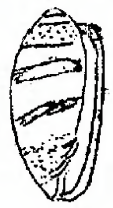
Figure from
Powell(1932), Fig 18



Genus: Volvarina Hinds, 1884
Type species: Marginella nitida Redfield, 1870

Subgenus: Haloginella Laseron, 1957
Type species: Marginella mustelina Angas, 1871

The type species has the following features:



Laseron (1957) Fig. 13

Laseron (1957) erected Haloginella because he thought that Volvarina was based on such insecure evidence (type locality unknown etc) and it was better to have the Australasian species tied to a well known type species. Coan (1965) treated the former as a subgenus of Volvarina and Ponder(1970) followed this action:

Volvarina (Haloginella) mustelina (Angas , 1871)

The common, darkly-banded intertidal N.Z. marginellid. "V. mustelina appears to be restricted to the northeast of the North Island as it has not been recorded south of East Cape, but it also occurs commonly in the south and southeast of Australia, including Tasmania. It is found mainly on semi-exposed coasts beneath stones and in crevices at low tide" (Ponder,1970 p.57)

Genus: Volvarinella Habe, 1951
Type species: Volvarinella makiyamai Habe, 1951

Coan (1965) has shown that Longinella Laseron, 1957 (Fig. 20 in Laseron) is a synonym of Volvarinella .

Volvarinella cairoma (Brookes, 1924)

A semitransparent yellowish shell with thin brown bands. Ponder (1970 p60) gives other details of the external appearance of the shell and animal.

"V. cairoma is common throughout the North Island, and it occurs at the Chatham Islands, but there do not appear to be any records of it from the South Island. It is generally found at low tide level living beneath stones, on brown algae or amongst coralline algal turf" (Ponder, 1970 p57)

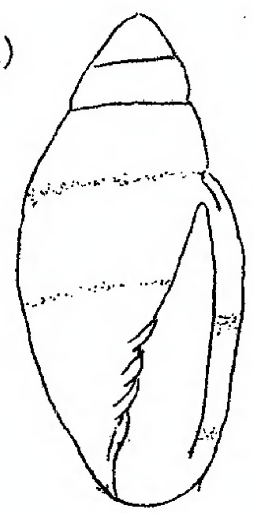


Fig. of V. cairoma from Powell (1957 facing p.46)

The above marginelline species have been thoroughly studied by Ponder(1970) and the genera and subgenera used have a thorough anatomical base. The other species grouped in these taxa by conchological association are provided in Powell's checklists.

Coan treats Closia Gray, 1857 as a subgenus of Bullata.

Cystiscinae

According to Coan the following are the names to use for the N.Z. four cystiscine species of marginellid:

Cystiscus angasi (Grosse, 1870)
Cystiscus vidae (Dell,1956)
Kogomea ficula (Murdoch & Suter, 1906)
Kogomea hardingae (Dell,1956)

Brief notes on the names used for N.Z. Cystiscine species:

Coan (1965) regarded Euliginella Laseron, 1957 as a synonym of Cystiscus Stimpson, 1865, the former based on the Australian (and supposedly N.Z.) species angasi. Dell (1956, p 127) suggested that Powell's N.Z. records of angasi were possibly his new species vidae which he (Dell) placed in Microvulina Habe 1951,. The latter is treated as a synonym of Crithe Gould, 1860, by Coan, and in that usage, does not appear to be available for the one or two N.Z. species.

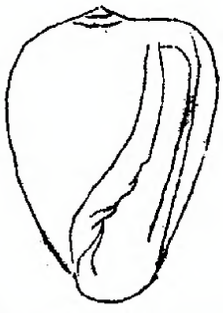


Fig. of Cystiscus vidae (Dell) from Dell (1956, Fig. 182)

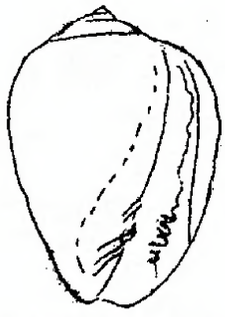


Fig. of Kogomea hardingae (Dell) from Dell (1956, Fig. 180)

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HALIOTIDAE OF THE SOUTH-WEST PACIFIC

BY W.J. PAUL

In the course of over thirty years of collecting Australian shells I have accumulated a nearly complete series of the species of Haliotidae recorded in the New Zealand and Australian zoogeographic regions. These shells range from small one inch forms of Haliotis varia to giant eight inch specimens of Haliotis conicopora. Colour patterns of Australasian species of the family vary greatly both internally and externally. The tropical species, which in general constitute a group of smaller forms, are the more colourful; while the large species, which are in general colder water forms, are duller and less attractive. In all, however, this is a very attractive family of molluscs, very popular with collectors.

As has happened with other colourful groups of shells, (Conidae, Cypraeidae, Cassidae etc) the collecting of shells showing minor variations has tempted scientists into applying names to forms which later study shows cannot be maintained as valid species. A host of names has arisen within the Holiotidae and only a few species are without a list of synonyms. Consequently there is no finality as yet as to the number of valid species in the family.

Australia is rich in species, having a greater number than any other area. Beyond Australia groups of species are located around Japan, South Africa, and along the west coast of North America. Occasional species occur in a number of areas throughout the tropical and temperate zones.

Authors have subdivided Linnaeus' genus Haliotis into several sub-genera entirely on shell features. I don't propose to discuss the validity of these in this paper. For the present purpose all species are treated as of the Genus Haliotis. It is of interest however, that Robert Talmadge, an accepted authority on Haliotidae, has pointed out that Haliotis cyclobates of South Australia is separable from all other Haliotidae on anatomical grounds. In this species the epipode has a single rim whereas other Haliotidae have a double rimmed epipode with a concave area between the rims. On this evidence he considered that Exohaliotis (Type cyclobates) should rank as a full genus. (Journal of Malacological Soc. Australia No 1 1957).

In New Zealand the family is represented by six species and sub-species all endemic to the area.

Haliotis iris Gmelin 1791 the paua ... on all coasts of North and South Islands, Steward Island and the Chathams.

australis Gmelin 1791 ... same area of distribution as H. iris, and extending to some Sub-Antarctic islands.

virginea virginea Gmelin 1791 ... round Stewart Island, South Island, and the southern half of North Island to about East Cape.

virginea crispata Gould 1847 ... North Island from Bay of Plenty of North Cape.

virginea huttoni Filhol 1880 ... at Campbell and Auckland Islands.

virginea morioria Powell 1938 ... at Chatham Islands.

New Zealand shell collectors have a considerable literature on these shells available to them.

On geographical grounds the species of Haliotidae in Australian waters can be considered in two groups ... the endemic species, and those having a wider distribution area. The latter group consists of Indo-Pacific forms in the northern warm waters, with the exception of Haliotis spadicea in the south west.

The two groups are considered separately in alphabetical order. I am not providing descriptions of the shells. These are available in a number of publications. The areas of distribution of the various species are listed, and lists of synonyms are given. The latter may not be complete, but will give collectors an appreciation of the status of many names which have been used.

Haliotis brazieri Angas 1869 ... confined to New South Wales.

coccoradiata Reeve 1846 ... southern Queensland, New South Wales and eastern Victoria.

conicopora Peron 1816 ... =granti Pritchard & Gatliff 1902 =gigantea Menke 1843 =cunninghami Gray 1826 = vixlirata Cotton 1943 from Port Philip, Victoria to Fremantle in Western Australia.

cyclobates Peron 1816 ... = excavata Lamarck 1822 from western Victoria to the Recherch Archipelago in south Western Australia.

dissona Iredale 1929 ... off-shore islands of north Queensland.

elegans Philippi 1844 ... in Western Australia from Cape Leeuwin to Shark Bay.

emmae Reeve 1846 ... Victoria, Tasmania and South Australia.

ethologus Iredale 1927 .. Great Barrier Reef and off-shore islands of northern Queensland.

hargravesi Cox 1869 ... confined to New South Wales.

howensis Iredale 1929 ... Lord Howe Island only. Some authorities have treated howensis as a synonym of hanleyi Ancey 1881 (see list of non-endemic species).

laevigata Donovan 1808 .. = excisa Gray 1856 =albicans Quoy & Gaimard 1834 = glabra Swainson 1822 Tasmania, and Victoria to south Western Australia.

melculus Iredale 1927 ... Queensland and Barrier Reef only.

roei Gray 1826 ... = sulcosa Philippi 1845 = scabricostata Menke 1843. From Victoria to Shark Bay in Western Australia.

ruber Leach 1814 ... =tubifera Lamarck 1822 =naevosa Martyn 1784 =gigantea Peron 1816 =improbulum Iredale 1924 =clathrata Reeve 1846. New South Wales, Victoria and South Australia.

Haliotis scalaris Leach 1814 . =rubicundus Gray 1826 = tricostalis Lamarck 1822 = tricostata Wood 1828. South Australia to Geraldton in Western Australia.

semiplicata Menke 1843.. =lauta Reeve 1846 confined to the south western part of Western Australia from Esperance to Fremantle.

squamata Reeve 1846 ... = funebris Reeve 1846 = squamosa Gray 1826. In Western Australia from Shark Bay to Broome.

whitehousei Colman 1959.. confined to New South Wales.

This first group, the endemic species may be summarised:-

Confined to Queensland	4
Confined to New South Wales	3
Within the general area, south east to south west Australia	8
Confined to Western Australia	2
Lord Howe Island	1

The non-endemics are mainly widely distributed Indo-Pacific species whose incursions into Australian waters occur in the tropical north.

Haliotis asinina Linne 1758 .. = asinum Donovan 1808. This common Indo-Pacific species occurs in Queensland and along the north coast to the northern part of Western Australia.

crebrisculpta Sowerby 1914 The Australian distribution of crebrisculpta consists only of northern Queensland. Beyond Australia it is found in the general area of the western Pacific and to Japan.

diversicolor Reeve 1846.. = tayloriana Reeve 1846 = gruneri Philippi 1848 = supratexta Lischke 1870.

I am aware of this species being collected in Australian only on the Barrier Reef. It is present throughout a large area of the western Pacific.

hanleyi Ancey 1881 ... Queensland only in Australia. Type locality is New Caledonia. This may be the same species as H. howensis.

ovina Gmelin 1791 ... = caelata Roding 1798 = latilabris Philippi 1851. Widely distributed in the Indo-Pacifc, and in Australia in Queensland and along the north coast.

spadicea Donovan 1808 ... = sanguinea Hanley 1840 = ficiformis Menke 1844. This is indeed the most interesting of the non-endemic Haliotids in Australia.

continued.

Haliotis spadicea Donovan 1808

continued .. In 1953 Miss Hope Macpherson of the National Museum of Victoria recorded the presence of H. spadicea at Cowaramup Bay in south Western Australia. Previously it was known only from South Africa. Specimens I have from Cowaramup Bay are identical with specimens from Port Alfred. The association between south West Australian and South African molluscs has been a cause of study for a long time, and the discovery of this Haliotid added another species to the list of related molluscs of the two areas.

varia Linne 1758 ... =aliena Iredale 1928 =viridis Reeve 1846 =gemma Reeve 1846 =pustulifera Pilsbry 1890 =semistriata Reeve 1846 =papulata Reeve 1846 =concinna Reeve 1846 =rubiginosa Reeve 1846 =astricta Reeve 1846 =granulata Roding 1798 =stomatiaeformis Reeve 1846.

In Australia H. varia ranges from northern New South Wales through Queensland and the Northern Territory coast to Houtman Abrolhos in Western Australia. It is very widely distributed in the Indo-Pacific, and, as will be observed from the lengthy synonymy many local variants have been given separate names, particularly by Reeve.

From the above notes on the distribution patterns of the species it will be seen that the Australian Haliotid fauna consists of:-

18	endemic species
7	Indo-Pacific species in the tropical north
1	South African species in the south west.

This is the largest congregation of species in any single zoogeographical region.

FOSSIL AND LIVING COWRIES OF NEW ZEALAND

BY DR. A.G. BEU

This study of New Zealand's cowries has been compiled mainly by extracting relative points from Cernohorsky's review of the New Zealand members of the group (1971 -- Records of the Auckland Inst. and Museum, 8: 103-29) and by the assistance of Dr. Philip Maxwell of the Geological Survey. Dr. Maxwell has a large manuscript in preparation by way of a study of our Cypraeacea, updating Cernohorsky's work and naming several new species.

Cowries, in the general sense, are well known for their beautifully polished, usually smoothly rounded shells, with a very low spire, or, in most species, the spire completely hidden in the smooth callus covering the outside of the shell. The smooth callus reflects the fact that the flaps of the mantle hide the shell completely when the animal is crawling along, and so makes it look like a piece of seaweed or sponge. Most Pacific "true cowries" (family Cypraeidae) are grazing carnivores that live on and eat sponges. Some small "allied cowries" may be herbivores. However, many of the cowry allies such as Volva and Pedicularia live all their lives on a single species, or a few species, of coelenterate, Pedicularia on stylasterine corals, and Volva and the Simnia group on gorgonians, or sea-whips.

The classification of cowries is "up in the air" at the moment, as the huge, elaborate classification set up by the Schilders and Iredale bears little relation to the anatomical features described by Alison Kay in Hawaii. For the purpose of this paper I have used some of the names proposed as sub-genera of Cypraea, as many, or perhaps most, workers now do.

We have relatively few fossil cowries in New Zealand, perhaps 12 species, compared with 30 or 40 in Australia, and more in Europe. This reflects our only marginally tropical, or cooler, sea temperatures for much of Tertiary time. The times when cowries occurred in New Zealand could be read as high temperature points on a graph of sea temperatures, if it is remembered that they should be used cautiously. Cowries have rather specialised ecologies, and should not be expected to be fossilised too easily if they are living in any given area. The fossil record of any rocky-shore animal is very incomplete.

Family: Cypraeidae

The "true cowries" with low spires or hidden spires; most with smooth, polished shells and toothed inner and outer aperture lips.

Genus: Cypraea Linnaeus 1758
Type species: Cypraea tigris Linaeus 1758

Sub-genus: Notadusta Schilder 1935
Type species: Notadusta victoriana Schilder 1935 .. Australia, fossil Miocene.

Cypraea (Notodusta) clifdenensis (Cernohorsky 1971)
A small, rounded, generalised Cypraea with fine, even teeth on both lips, occurring rarely at several localities at Clifden, Southland (Lr and Mid Miocene); about 20 specimens known; also very rarely at Kaipara Harbour (Otaian or Altonian, Lr Miocene), Parengarenga Harbour (Altonian, Lr Miocene) and in South Wairarapa (Waiauan, Mid Miocene).

Cypraea (Notodusta) new sp. Maxwell, MS, a smaller form with a more strongly curved aperture, figured by Cernohorsky as trelissickensis (Suter), known only from Pakaurangi Point, Kaipara Harbour (Otaian, Lr Miocene).

Cypraea (Notodusta) ? trelissickensis Suter 1917, is based on poor internal moulds similar in size and shape to C. clifdenensis, but lacking all shell so not even clearly referable to Notodusta.

Cypraea (Notodusta) new sp., Hampden, South Otago (Bortonian), Mid Eocene)... a small, rounded species similar to some of the tiny Australian ones.

Cypraea (Notodusta) new sp., White's Creek, Aire R., North Canterbury, (Mangaorapan, Lr. Eocene), only a quarter inch long.

Cypraea (Notodusta) ? new sp., incomplete specimen, McCullough's Bridge, South Canterbury, (Kaiatan, Up. Eocene), a fragment of a shell similar to C. clifdenensis.

Cypraea (Notodusta) ? new sp., .. poorly preserved .. Red Bluff Tuff, Pitt Island, age about Waipawan or Mangaorapan (Lr Eocene), a small shell, more inflated than most other New Zealand ones; other similar shells from tuffs below limestone, Everett's Quarry, south of Oamaru (Whaingaroan, Oligocene) are also poorly preserved. Other poor internal moulds from Kakanui, south of Oamaru, and from the MacDonald limestone at Deborah, south of Oamaru, not identifiable to species (age Waitakian and Duntroonian ? Oligocene and possibly Lower Miocene).

Sub-genus: Bernaya Jousseaume 1884
Type species: Cypraea media Deshayes 1831 fossil Upper Eocene, Europe.

Cypraea (Bernaya) zoiloides (Schilder 1958) is based on Dr. Fleming's poorly preserved single specimen identified as "Bernaya sp." from Pahi, Kaipara Harbour (Bortonian, Mid Eocene).

Cypraea (Bernaya) chathamensis (Cernohorsky 1971) is a very inflated, rounded, smooth shell from Pitt Island, said to be from the Whenuataru Tuff (Opoitian, Pliocene), but just as likely to be from the Red Bluff Tuff underlying it (about Waipawan or Mangaorapan, Lr. Eocene) as we collected 2 other cypraeids in the lower unit.

Cypraea (Bernaya) ? ficoides (Hutton 1873) is based on poorly preserved, poorly localised moulds said to be from "Oamaru", age unknown. Cernohorsky (1971) identified other internal moulds from Kakanui, south of Oamaru (? Whaningaroan - Waitakian) and two internal moulds of a more inflated form from Parengarenga Harbour (Altonian Lr. Miocene) as this species, but it is impossible to tell how many species are involved.

Sub-genus: Erosaria Troschel 1863
Type species: Cypraea erosa Linnaeus 1758, recent Indo Pacific

Cypraea (Erosaria) cernica (Sowerby 1870) .. small shell (about one inch long) brownish yellow, white spotted species now quite well known from the Poor Knights Islands, and as one beach worn specimen from Cape Maria Van Diemen. Burgess ("The Living Cowries") does not recognise any geographic sub-species of this species, which ranges from Mauritius and Ceylon to Japan, Hawaii, Tahiti and around northern Australia. The Schilders and Iredale named about 8 or 10 geographic forms, certainly more than are likely to occur, and Cernohorsky and Powell recognise Cypraea cernica tomlini (Schilder 1930) as the name for the New Zealand shell. Take your choice.

Sub-genus: Ravitrona Iredale 1930
Type species: Cypraea caputserpentis Linnaeus 1758, recent Indo Pacific.

Cypraea (Ravitrona) caputserpentis Linnaeus 1758 .. not recorded living in New Zealand as yet, but could well turn up eventually as it lives south of vitellus in New South Wales.

Sub-genus: Lyncina Troschel 1863
Type species: Cypraea lynx Linnaeus 1758, recent Indo Pacific

Cypraea (Lyncina) vitellus Linnaeus 1758 .. this brown, white-spotted shell is known from about half a dozen specimens from the Poor Knights Islands, and one from central eastern Northland. New Zealand shells are rather dark and reach a large size, and so resemble Sydney shells rather than the paler, smaller, typical Pacific shells.

Sub-genus: Zoila Jousseaume 1884
Type species: Cypraea friendii Gray 1831 recent, Western Australia

Cypraea (Zoila) new sp. .. a single, relatively large, narrow, long-spired shell from the Red Bluff Tuff (Waipawan or Mangaorapan, Lr Eocene) of Pitt Island closely resembling Cypraea friendii, but narrower.

Sub-genus: Cypraeovula Gray 1824
Type species: Cypraea capensis Gray 1828, recent South Africa.

Shells of this sub-genus have fine spiral sculpture over the whole shell.

Cypraea (Cypraeovula?) new sp. .. a poor internal mould from Ardgowan Road, Oamaru (About Waitakian, probably late Oligocene) has a fragment of inner lip showing regular, close, fine, spiral sculpture.

Family: Ovulidae

Egg cowries, spindle cowries etc.

Genus: Eocypraea Cossman 1903

Eocypraea (?) novaezelandiae (Schilder 1941), predates Fleming's (?) Eocypraea murdochi (1950) from Pahi, Kaipara Harbour (Bortonian, Mid Eocene) and is based on a single poor shell, not certainly referable here.

Genus: Volva Roeding 1798
Sub-genus: Phenacovolva Iredale 1930
Type species: Phenacovolva nectarea Iredale 1930

Volva (Phenacovolva) longirostrata (Sowerby 1828) .. a spindle shaped species living on gorgonians at the Poor Knights Islands.

Genus: Pedicularia Swainson 1840
Type species: Pedicularia sicula Swainson 1840

Pedicularia pacifica Pease 1865 (= moaria Powell 1937) .. a flattened, circular, sculptured shell with a keel in the aperture, common off the Three Kings Islands in dredged samples; lives attached to stylasterine corals.

Genus: Simnia Risso 1826

Simnia sp. Cernohorsky (1971) figured a single poor internal mould from Kaipara Harbour (Altonian, Lr Miocene); one of the elongate "allied cowries".

Family: Triviidae

The "ribbed cowries", and their allies.

Sub-family: Triviinae

There are about 8 or 10 New Zealand fossil species and the living Ellatrivia merces (Iredale 1924).

Sub-family: Eratoinae

These are small marginellid-like shells with toothed apertures, most with a naked spire. There are none living in New Zealand, but they are widespread in the Indo Pacific. About 20 species are known as fossils in New Zealand. The largest (but one of the rarest) is Willungia maoria Powell, from Clifden (Lr Miocene), an almost spherical shell with a toothed sperture and a narrow outer lip.

LAMARCK'S GEOGRAPICAL MOLLUSCAN NAMES

BY W.J. PAUL

Jean Baptiste Pierre Antoine de Monet, Comte de Lamarack (1744-1829), has been described as "one of the world's greatest natural philosophers". He was for many years Professor of Zoology at the Natural History Museum of Paris. His collection of shells, numbering many thousand specimens, is now in the Natural History Museum of Geneva. In the course of his study of molluscs he named a vast number of new species. The great majority of his specific names are words indicative of some aspect of the shell, being words relative to the shape, sculpture, colour or some other characteristic. He did however depart from this line of naming to the use of names of geographical origin on a limited number of occasions. Unfortunately, in doing so he was at the mercy of his informants, who apparently were not themselves too well informed on where the shells came from. The consequence of him having placed faith in what he was told of the origins of some of his aquisitions has left us today with a number of species with names which bear no relationship to their habitats.

The following are notes on some species which were named by Lamarck apparently on faulty advice. Possibly there are others unknown to me.

Hinea brasiliana Lamarck 1822

This species was first collected in New South Wales. It occurs in South East Australia, Queensland, Norfolk Island, Lord Howe Island and northern New Zealand. Exactly how Lamarck came to believe it to be from Brazil we will never know.

Oliva senegalensis Lamarck 1811

This name is a synonym of Oliva peruviana Lamarck 1811. Fortunately the name peruviana takes precedence. It would appear that the name senegalensis was applied on the grounds of separate advice of the origins of specimens acquired. The species occurs along the coasts of Peru and northern Chile.

Cassis madagascariensis Lamarck 1822

The handsome large Cassid bearing this name is found nowhere near Madagascar. It is a species of the western Atlantic ranging from North Carolina to Bermuda and the West Indies.

Calliostoma javanicum Lamarck 1822.

Someone must have told Lamarck that this rather delicate brown and chocolate shell came from Java. It is however another western Atlantic species. It occurs in Florida and the West Indies.

Amblychilepas javanicensis Lamarck 1822.

Here Java comes in for credit quite undeserved once more. The type locality of this key-hole limpet has been designated as Tasmania. The shell is not in Java, but is a cold water form found in New South Wales, Victoria, Tasmania, South Australia and the south western part of Western Australia.

Conus australis Lamarck 1810.

Holten applied the name Conus australis to this shell in 1802. In 1810 Lamarck also named it, so the Lamarckian name sinks into synonymy, but it does appear to be another case of faulty advice. Conus australis is a northern Pacific species collected mainly off southern Japan in deep water.

NEW ZEALAND CERITHIOPSIDAE

This family has been the subject of a revision by Mr. B.A. Marshall of the National Museum, in a paper entitled "Cerithiopsidae of New Zealand, and a Provisional Classification of the Family", published in the New Zealand Journal of Zoology 1978 Vol 5, pp 47-120.
Several new species have been added to the family. Some species which have previously been assigned to the Cerithiopsidae have been transferred to other families, and a number of names previously in use have been reduced to synonymy.

The following is the list of species recognised by Mr. Marshall as valid in this family.

Alipta crenistria (Suter 1907)
Mendax trizonalis trizonalis (Odhner 1924)
Mendax trizonalis odhneri (Powell 1927)
Mendax trizonaloides Marshall 1978
Mendax marginata (Suter 1908)
Mendax hebetatus Marshall 1978
Mendax subapicina (Dell 1956)
Mendax seilaformis Marshall 1978
Euseila stiria (Webster 1906)
Euseila nucleoproducta (Dell 1956)
Aliptina acheronae Marshall 1978
Cerithiopsidella blacki Marshall 1978
Laskeya (Laskeya) elegantula (Powell 1930)
Laskeya (Altispecula) aureola (Powell 1933)
Retilaskeya zelandica Marshall 1978
Specula styliformis (Suter 1908)
Specula campbellica (Powell 1955)
Specula retifera (Suter 1908)
Zaclys sarissa Murdoch 1905
Zaclys murdochi Marshall 1978
Cerithiopsis powelli Marshall 1978
Joculator sublima Marshall 1978
Horologica dirempta (Odhner 1924)
Horologica cowei Marshall 1978
Synthopsis caelata (Powell 1930)
Synthopsis regia Marshall 1978
Synthopsis acuminata Marshall 1978
Prolixodens infracolor (Laseron 1951)
Prolixodens benthica Marshall 1978
Prolixodens crassa Marshall 1978

Sundaya tuberculata Powell 1927
Seila (Lyroseila) cincta (Hutton 1886)
Seila (Lyroseila) maoria Marshall 1978
Seila (Lyroseila) dilecta Marshall 1978
Seila (Notoseila) terebelloides (Hutton 1873)
Seila (Notoseila) elegantissima Marshall 1978
Seila (Hebeseila) bulbosa (Suter 1908)
Seila (Hebeseila) regia Marshall 1978

The 37 species and one sub-species listed are all described in the text, their synonymy listed, and excellent illustrations provided.

A FIRST FIND FOR THE WELLINGTON AREA

BY BETTY WOLF.

While shelling at the low tide mark in Shelly Bay, on the east side of Evans Bay, Wellington, on 28 April 1978 I found a tiny brown speck on the edge of a rock pool. I took it home, and later at the National Museum had it identified. It turned out to be Seila (Lyroseila) cincta (Hutton 1886). This is the first record of this species in the Wellington area.

Editor's note. Readers looking for Seila (Lyroseila) cincta in Powell's "Shells of New Zealand" will not find it there. Suter, in his "Manual of the New Zealand Mollusca", treated the species as a synonym of Seila terebelloides von Martens 1873. Hutton's name has however been brought back into its correct use .... see "Cerithiopsidae of New Zealand, and a Provisional Classification of the Family" by B.A. Marshall (New Zealand Journal of Zoology, 1978 Vol. 5, Page 96.)

NOTES ON SOME AUSTRALIAN SHELLS IN NEW ZEALAND

BY W.J. PAUL

There are some molluscan families well represented in the Australian fauna but represented in New Zealand by only a single species, the same species being found in Australia.

These outliers of the main distribution areas of the species are worthy of attention. The source from which the species have entered the New Zealand fauna is obviously Australia, and to the New Zealand shell collectors some knowledge of their distribution patterns in Australia and their status in the fauna will lead to a better understanding of their position here.

It is proposed to compile a series of short articles on some of the more outstanding of these species and publish these in succeeding issues of "Cookia".

In addition to the species described above, notes on a number of Australian species present in New Zealand will be included in the series.

1. NERITA ATRAMENTOSA Reeve 1855

This shell has been known for a long time as Nerita melanotragus Smith 1884. Research has however shown that the shell which Reeve named from West Australia in 1855 is the same species which Smith had named from New South Wales in 1884, and we are bound to use the earlier name.

In New Zealand the species is found all round the North Island, more commonly on the east coast from East Cape northwards, and in the South Island on the coast from Nelson westwards. Beyond New Zealand it is present at the Kermadecs, Lord Howe Island, Norfolk Island, and in Australia from Southern Queensland right round the southern coast line and up the west coast to Point Cloates, just south of the Exmouth Gulf... It is also in Tasmania. This is probably the most common shell on the intertidal rocks in New South Wales and Victoria. Whether there is actually a cline to be observed in the Australian distribution is not certain, but West Australian specimens are generally larger than specimens from eastern localities.

The Family Neritidae is well represented in Australia by a number of species of Nerita and several species of Neritina and its allied genera. Over a dozen species of Nerita are in the Australian fauna, principally in the tropical north, and most of these are of wider distribution in the Indo-Pacific. Nerita atramentosa is however the only species of the Family in Southern New South Wales, Victoria, Tasmania, South Australia and the south western sector of West Australia.

Suter in his "Manual Of The New Zealand Mollusca" 1913 states that this shell was "Brought to England by Captain Cook". If this is so, it appears strange that it was not named till 1855, and then from West Australia.

In the fifth edition of his "Shells of New Zealand" Powell (1977) has continued the use of Smith's name. It is not like Dr. Powell not to be up with the latest.

2. HINEA BRASILIANA (Lamarck 1822)

Here we have one of the unfortunate results of the strict application of the rules regarding zoological nomenclature. This shell was first collected by Colonel W. Paterson who came out to New South Wales as Lieutenant Governor in 1791. Specimens which he had collected later came into the hands of Lamarck who somehow was misled into believing they came from Brazil. The shell has however no relationship with that country, but we are stuck with the original name applied to it. This small species lives in clusters under and among rocks, hence a number of common names have been applied to it. It has variously been named "clusterwink", "yellow-coated clusterwink" and "jockwink" in Australia.

In New Zealand the species has been collected at several places in the far north. Beyond New Zealand it occurs at Lord Howe Island, Norfolk Island and on the coast of Australia from southern Queensland to South West Australia. It does not appear in Tasmanian faunal lists.

The Family Planaxidae to which Hinea belongs is also represented in Australia by species of the genus Planaxis and Quoyia. Hinea brasiliana is however the only member of the Family in the area from southern New South Wales to South West Australia.

3. TRIVIA MERCES Iredale 1924

The shell recorded by Suter in his manual as Trivia australis Lamarck 1822 has gone through a series of name changes in respect of both genus and species since his time and we have now come down, in the fifth edition of Powell's "Shells of New Zealand" to .... Trivia (Niveria) merces Iredale 1924.

Of the Australian molluscs represented in the New Zealand fauna this species appears to have the next widest distribution in Australia to Nerita atramentosa. On the east coast it extends to northern New South Wales. From there it is found all along the New South Wales coast, throughout Victoria and South Australia, and in Western Australia as far north as Geraldton. It is also present in Tasmania and the islands of Bass Strait.

The New Zealand distribution of the species appears to be the North Island only, having been collected as far south as the entrance to Wellington Harbour.

I am unaware of it having been collected in the South Island.

When Finlay applied the species name memorata in 1927 he drew some distinctions between New Zealand and Australian specimens. His points of difference, however, are not substantiated by the evidence. New Zealand specimens are quite indistinguishable from some of the variants found in the wide range of the species in Australia.

4. CONUS KERMADECENSIS Iredale 1912

Whether we regard this as primarily a New Zealand or an Australian shell is of little consequence. It occurs on both sides of the Tasman, but was originally named from specimens collected at the Kermadec Islands which are part of a separate Indo-Pacific sub-region.

This cone has been a subject of some interest in Australia in recent years. J.A. Marsh in his "Cone Shells of the World" 1964, commented...

> "Although more than 4,000 miles separate the locality of this species from the type locality there is little doubt as to its identity. A number of specimens were trawled in 80 to 100 fathoms off Cape Moreton in Queensland by the Fisheries Research vessel Challenge".

By the way, don't confuse this vessel with the "Challenger" which carried out so much oceanic research last century.

In a conversation I had with Tony Marsh shortly before he died in 1967 he suggested the real fact was that this shell had been in deep water in Australia for a long time, and it was interesting that such a species should be located in shallower water on the east side of the Tasman.

Cones are, in general, inhabitants of intertidal waters around coral reefs. In the case of Conus kermadecensis, however, there is evidence of fairly wide deep water distribution.

In the "W.A. Shell Collector" September 1970, Frank Turnbull listed Conus kermadecensis among the West Australian cones on the grounds that specimens in the Western Australian Museum which had been dredged in the Roebourne area had been identified by Dr. Lim as being this species. I have seen the specimens in that Museum and feel sure Dr. Lim is right. I later sent Frank Turnbull a specimen I had from the type locality for comparison.

It seems therefore that Conus kermadecensis is a widely distributed species found in northern New Zealand, Kermadec Islands, southern Queensland, and north west Australia, but with some wide gaps in the area. It is notable, however, that the Queensland specimens are from deeper water than the Kermadec or New Zealand ones, and although the depth from which the Roebourne specimens were obtained is not recorded, the implication is that the species has a deep water habitat in Australia, and the gaps in our present knowledge of its Australian distribution may be later filled by dredging along the coasts of northern Queensland and the Northern Territory.

Conus kermadecensis accordingly appears to be the most widely distributed of all the deep water species of the family Conidae. The other cones from deep water seem to be all confined to very restricted areas.